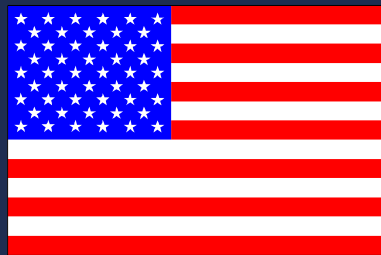




# Federal Railroad Administration

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## Track Safety Standards (TSS) 49 CFR Part 213 Subpart A - General Excepted Track & Classes 1 - 5 Overview



# Presentation Notes

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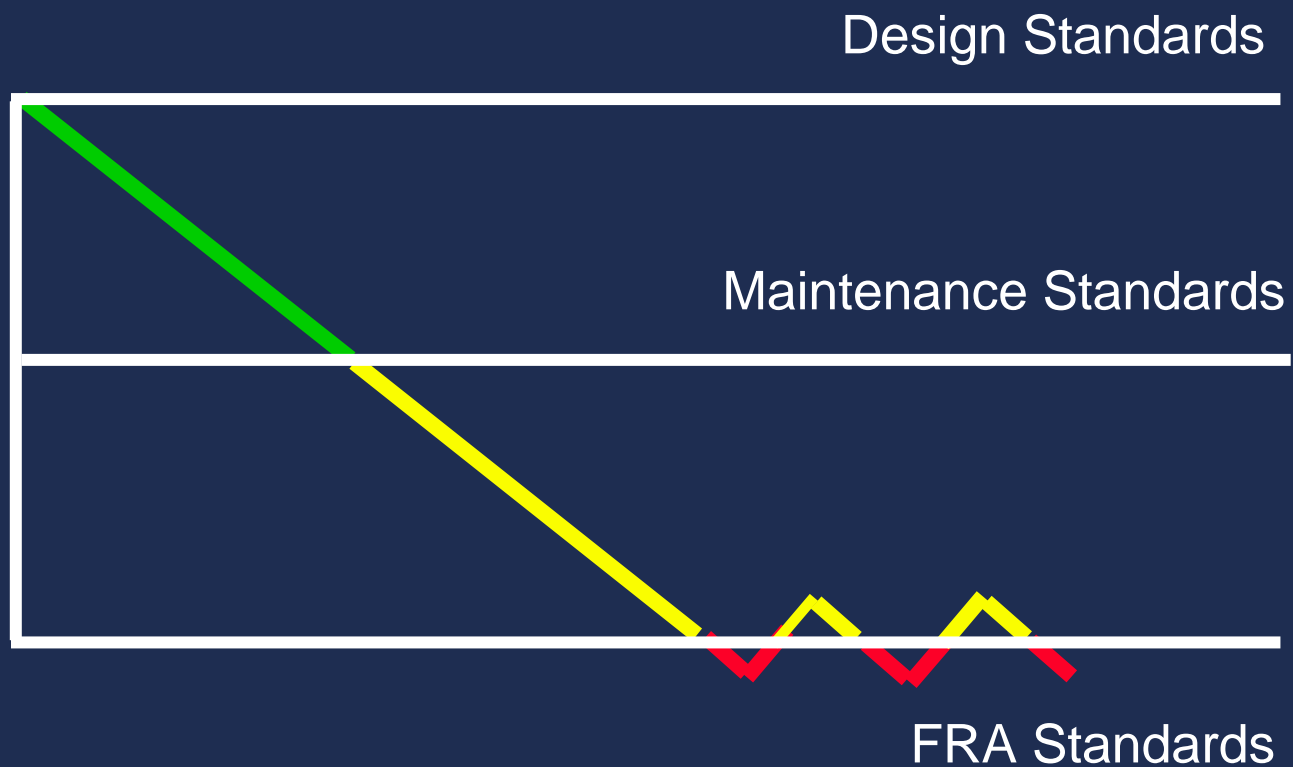
- This presentation is intended to provide guidance in broad terms. It is not intended to serve as a complete explanation of the regulations or as a substitute for application of the regulations to specific facts.
- With the exception of definitions, each section shown in this presentation are brief summaries of the regulation text. User must consult the complete regulation documentation when necessary.
- This presentation is based on the Final Rule published in the Federal Register June 22, 1998, Vol. 63, No. 119, [Docket RST-90-1, Notice 8] effective Sept. 21, 1998 and 49 CFR Part 213 [Docket No. RST-90-1, Notice No. 9] RIN 2130-AB32 effective April 10, 2001.

## 213.1 Scope

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- (a) This part prescribes minimum safety requirements for railroad track that is part of the general railroad system of transportation. The requirements prescribed in this part apply to specific track conditions existing in isolation. Therefore, a combination of track conditions, none of which individually amounts to a deviation from the requirements in this part, may require remedial action to provide for safe operations over that track. This part does not restrict a railroad from adopting and enforcing additional or more stringent requirements not inconsistent with this part.

## 213.1 Scope (Continued)



## 213.2 Preemptive Effect

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Under 49 U.S.C. 20106 (formerly § 205 of the Federal Railroad Safety Act of 1970, 45 U.S.C. 434), issuance of these regulations preempts any State law, rule, regulation, order, or standard covering the same subject matter, except a provision directed at an essentially local safety hazard that is consistent with this part and that does not impose an undue burden on interstate commerce.

## 213.3 Application

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- (a) Except as provided in paragraph (b) of this section, this part applies to all standard gage track in the general railroad system of transportation.
- (b) This part does not apply to track --
  - (1) Located inside an installation which is not part of the general railroad system of transportation;  
or
  - (2) Used exclusively for rapid transit service in a metropolitan or suburban area.

# STB's Rail Carrier Classes

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- Class I: Carriers with annual operating revenue of \$319.3 million or more.
- Class II: Revenue less than \$319.3 million but in excess of \$25.5 million
- Class III: Revenue of \$25.5 million or less and all switching and terminal companies regardless of revenue.

# “Short Line” & “Regional” Railroads

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- Regional railroads are line-haul RR's operating at least 350 miles of road with revenue between \$40 million and Class I.
- Short Line railroads fall into two categories:
  - A. Local RR's are line-haul RR's below Regional criteria.
  - B. Switching & Terminal RR's transfer cars between railroads and customers solely within a facility or group of facilities.



# Classes of Track

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- Excepted Track to Class 5
- Track Geometry, Structure and Railroad determines class of track.
- Railroad Class, Regional or Short Line – are inspected the same – according to class of Track and gross annual tonnage on track segment.

# Better track-higher speed



## 213.5 Responsibility For Compliance

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- (a) Except as provided in (b), an owner that knows or has notice that the track does not comply, shall --
  - (1) Bring the track into compliance;
  - (2) Halt operations over that track; or
  - (3) Operate under authority of a person designated under 213.7(a) subject to conditions set forth in this part.
- (b) If an owner designates a segment of track as “excepted track” (213.4), operations may continue without complying with the provisions of subparts B [roadbed], C [geometry], D [structure] , and E [appliances], unless otherwise expressly stated.

## 213.5 Responsibility For Compliance

### (Continued)

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- (d) The Administrator may hold the track owner or the assignee or both responsible for compliance with this part and subject to penalties under 213.15.
- (e) A common carrier by railroad which is directed by the Surface Transportation Board to provide service over the track of another railroad under 49 U.S.C. 11125 is considered the owner of that track for the purposes of the application of this part during the period the directed service order remains in effect.



## 213.7 Designation of Qualified Persons to Supervise Certain Renewals and Inspect Track (Continued)

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(b) Owner shall designate qualified persons to inspect track for defects.

Each person designated must have --

(1) At least --

(i) 1 year of experience in railroad track inspection; or

(ii) A combination of inspection experience and inspection training or from college program;

(2) Demonstrated to the owner that he --

(i) Knows and understands the requirements of this part;

(ii) Can detect deviations from those requirements;

(iii) Can prescribe appropriate remedial action to correct or safely compensate for those deviations; and

(3) Written authorization from the owner to prescribe remedial actions to compensate for deviations, pending review by person under (a).

## 213.17 Waivers

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- (a) Any owner of track to which this part applies or other person subject to this part may petition the Federal Railroad Administrator for a waiver from any or all requirements prescribed in this part. The filing does not affect that person's responsibility for compliance with that requirement while the petition is being considered.
- (b) Each petition for a waiver under this section must be filed in the manner and contain the information required by part 211 of this chapter.
- (c) If the Administrator finds that a waiver is in the public interest and is consistent with railroad safety, the Administrator may grant the waiver subject to any conditions the Administrator deems necessary.

## 213.15 Penalties

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- (a) Any person who violates any requirement of this part or causes the violation of any such requirement is subject to a civil penalty of at least \$500 and not more than \$11,000 per violation, except that: Penalties may be assessed against individuals only for willful violations, and, where a grossly negligent violation or a pattern of repeated violations has created an imminent hazard of death or injury to persons, or has caused death or injury, a penalty not to exceed \$22,000 per violation may be assessed. (Continued)

## 213.9 Class of Track - Operating Speed Limits

- (a) Except as provided in paragraphs (b) of this section and 213.57(b), [unbalance], 213.59(a) [elevation runoff in a curve], and 213.113(a), [rail defects] and 213.137(b) and (c) [frogs], the following maximum allowable operating speeds apply --

| Track Class | Maximum Speed |           |
|-------------|---------------|-----------|
|             | Freight       | Passenger |
| Excepted    | 10            | N/A       |
| 1           | 10            | 15        |
| 2           | 25            | 30        |
| 3           | 40            | 60        |
| 4           | 60            | 80        |
| 5           | 80            | 90        |

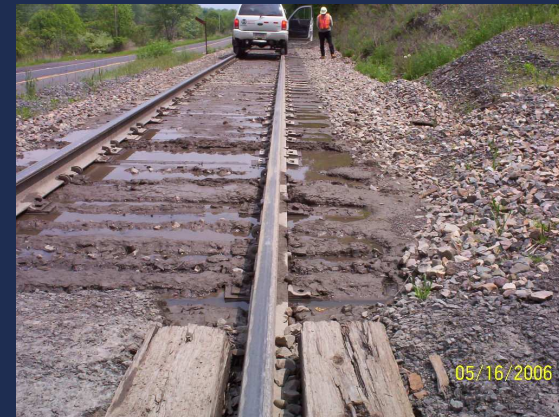


## 213.9 Class of Track - Operating Speed Limits (Continued)

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- (b) If a segment of track does not meet all of the requirements for its intended class, it is reclassified to the next lowest class of track for which it does meet all of the requirements of this part. However, if the segment of track does not at least meet the requirements for Class 1 track, operations may continue at Class 1 speeds for a period of not more than 30 days without bringing the track into compliance, under the authority of a person designated under 213.7(a), who has at least one year of supervisory experience in railroad track maintenance, after that person determines that operations may safely continue and subject to any limiting conditions specified by such person.

# Track Inspections

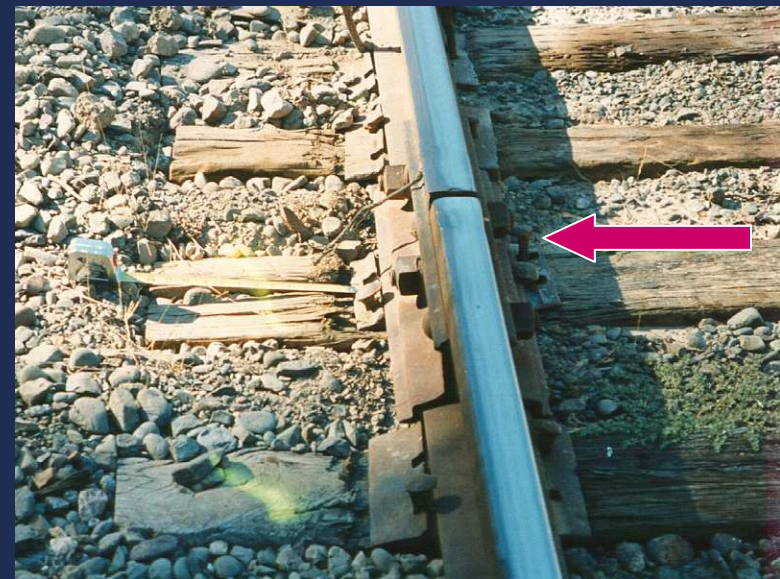




## 213.13 Measuring Track Not Under Load (Continued)



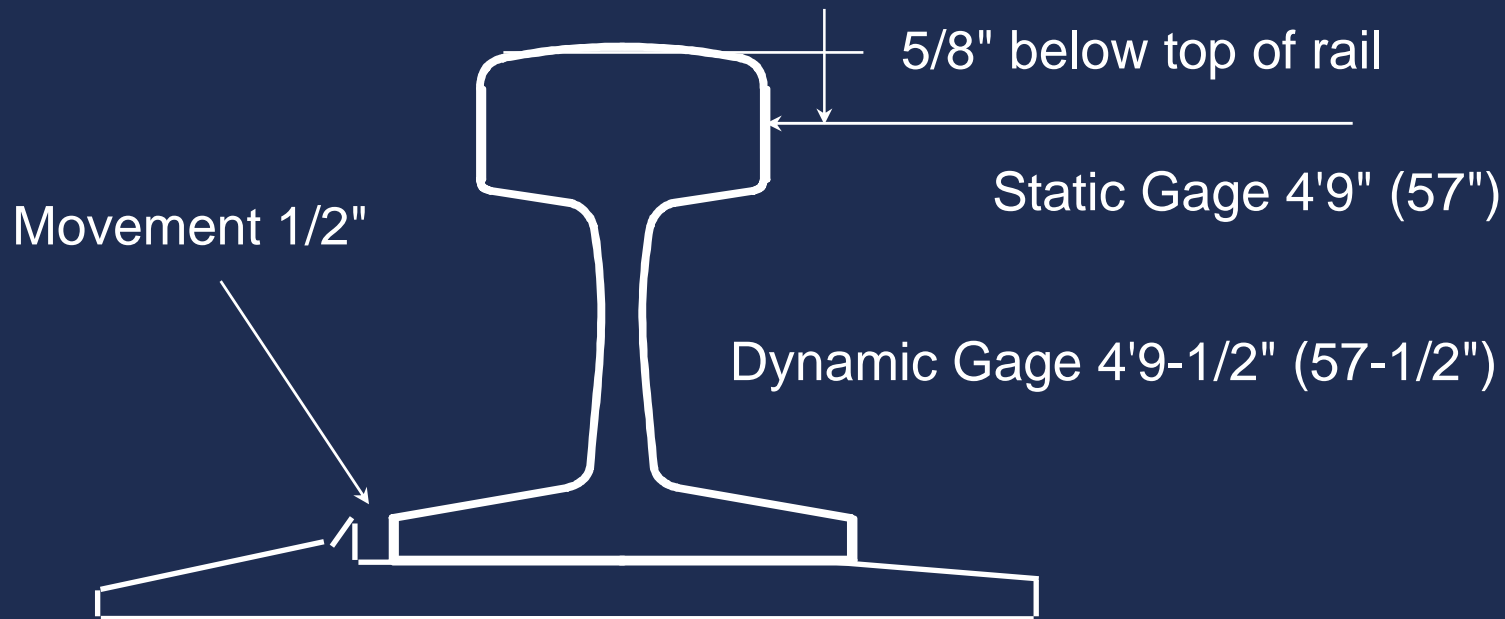
Vertical Load



Lateral Load

## 213.13 Measuring Track Not Under Load

When unloaded track is measured to determine compliance with requirements of this part, the amount of rail movement, if any, that occurs while the track is loaded must be added to the measurements of the unloaded track.



# Track Gage

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- **Gage**
- Class of Track: At Least:No More Than:
- Excepted Track      N/A      58 ¼"
- Class 1 Track      56"      58"
- Class 2 & 3 Track      56"      57 ¾"
- Class 4 & 5 Track      56"      57 ½"

# Track Alignment

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- Deviation of the mid offset from a 62' cord may not be more than measurement for curves and tangent track:
- Class 1                      5"
- Class 2                      3"
- Class 3                      1 3/4"
- Class 4                      1 1/2"

# Track Surface

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| Track Surface       | Class of Track |          |          |          |
|---------------------|----------------|----------|----------|----------|
|                     | <u>1</u>       | <u>2</u> | <u>3</u> | <u>4</u> |
| Runoff in 31'       | 3 1/2"         | 3"       | 2"       | 1 1/2"   |
| Dev. From Uniform   | 3"             | 2 3/4"   | 2 1/4"   | 2"       |
| Dev. From 0 X-level | 3"             | 2"       | 1 3/4"   | 1 1/4"   |
| Difference in 62'   | 3"             | 2 1/4"   | 2"       | 1 3/4"   |

# Track Structure - Ties

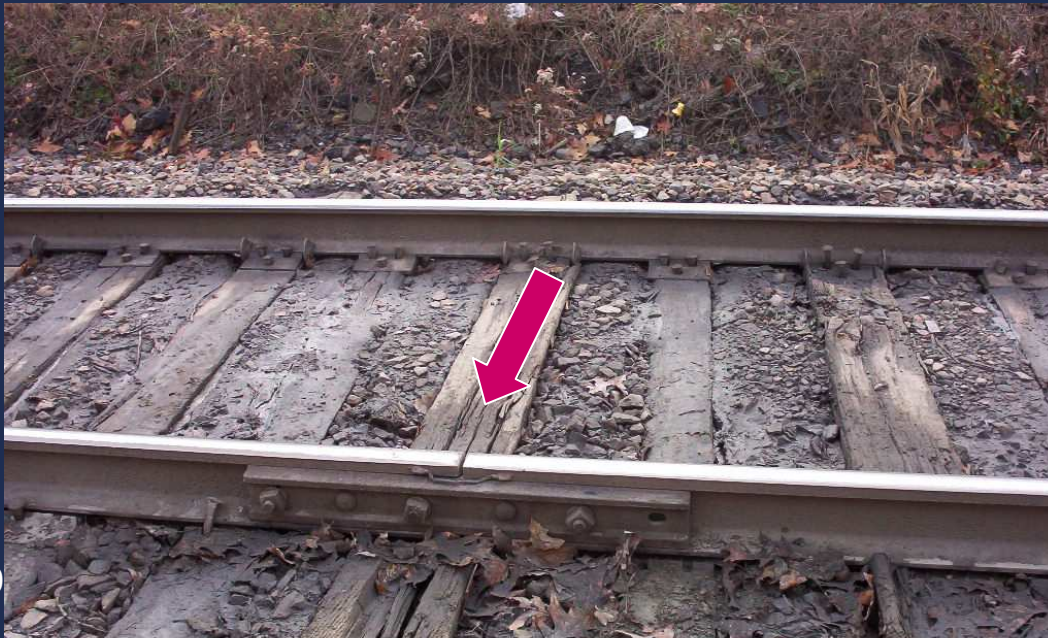
- Number of effective ties in 39' Segment:

| Class of Track: | Tangent,               | T.O. &       |
|-----------------|------------------------|--------------|
|                 | Curve $\leq 2$ degrees | Curves $> 2$ |
| 1               | 5                      | 6            |
| 2               | 8                      | 9            |
| 3               | 8                      | 10           |
| 4 & 5           | 12                     | 14           |



# Joint ties

- Class 1 & 2 1 Effective tie within 48” of center.
- Class 3-5 1 Effective tie within 36”
- Or 2 effective ties within 48”



# Rail end mismatch

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| ● <u>Class:</u> | <u>On Tread</u>  | <u>On Gage Side</u> |
|-----------------|------------------|---------------------|
| ● 1             | $\frac{1}{4}''$  | $\frac{1}{4}''$     |
| ● 2             | $\frac{1}{4}''$  | $\frac{3}{16}''$    |
| ● 3             | $\frac{3}{16}''$ | $\frac{3}{16}''$    |
| ● 4 & 5         | $\frac{1}{8}''$  | $\frac{1}{8}''$     |

# Rail Joints

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- Joint bars in Class 2-5 – 2 bolts in each rail
- Joint bars in Class 1      1 bolt in each rail
- Crack or broken in middle must be replaced
- Crack or broken other than center in class 3-5 must be replaced.

# Joint Bar



# Other Track Class Differences

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- Number of Ties Plates
- Torch Cut Rails and Joint Bars
- Frog Measurements



# Turnout- Takes Train from one track to another.



# Non Class Specific

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- Roadbed – Drainage, vegetation, ballast
- Broken rails – remedial action
- Derails
- CWR Management

## 213.4 Excepted Track

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A track owner may designate track as excepted provided -

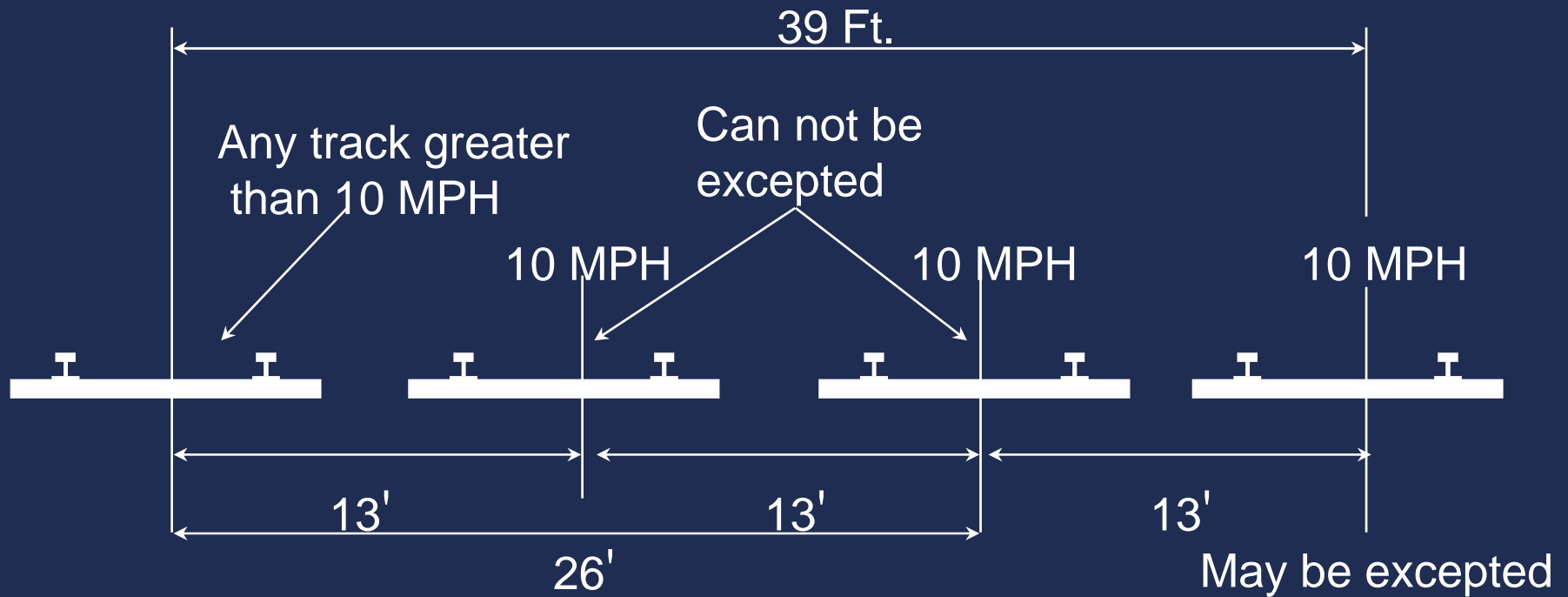
- (a) The segment is identified (timetable, etc.).
- (b) The identified segment is not located within 30' of an adjacent track with simultaneous speed 10 mph+.
- (c) The identified segment is inspected in accordance with 213.233(c) [inspection intervals] and 213.235 [switch & track crossing inspections] at Class 1 track frequency.
- (d) The identified track is not located on a bridge including the track approaching the bridge for 100' on either side, or located on a public street or highway, if Haz-Mat railroad cars are moved over the track.



## 213.4 Excepted Track

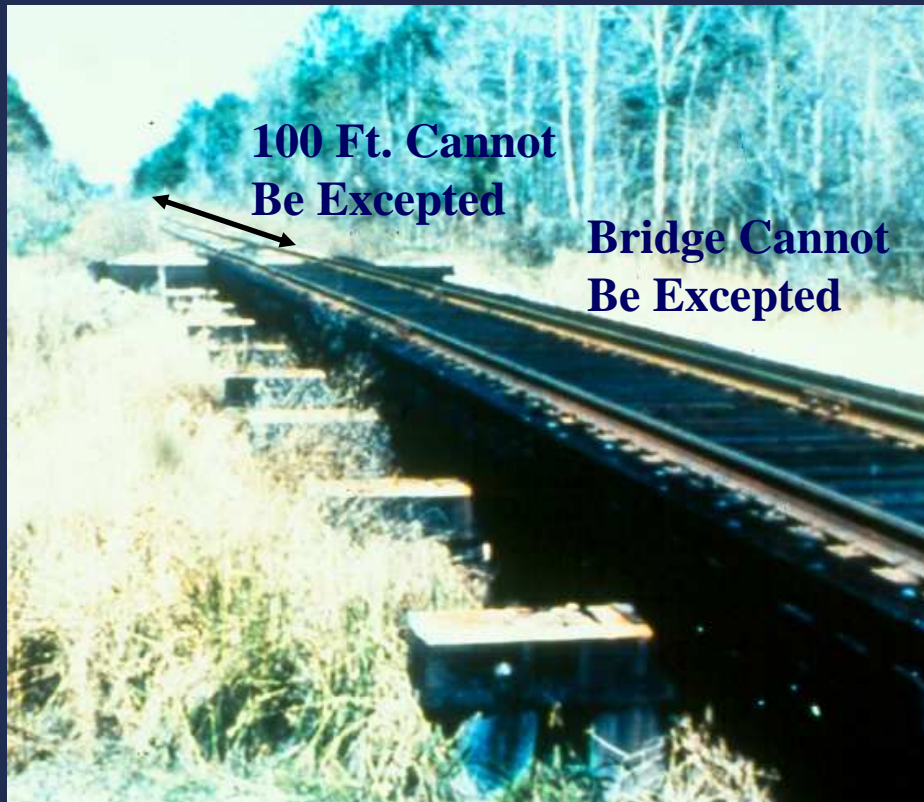
### Adjacent Track Example

Note: “adjacent track” means any track in proximity to the track in question



## 213.4 Excepted Track (Continued)

If Track Carries Haz-Mat



## 213.4 Excepted Track

### (Continued)

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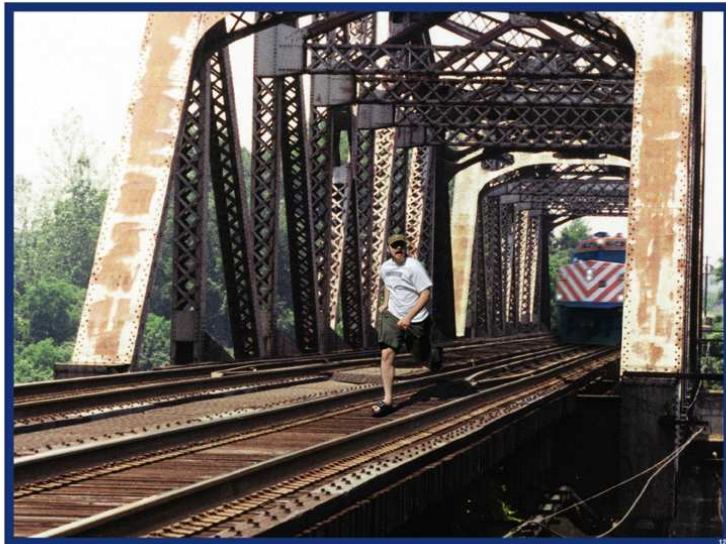
- (e) The railroad conducts operations on the identified segment under the following conditions
  - (1) 10 mph maximum speed
  - (2) No occupied passenger train shall be operated
  - (3) Maximum of 5 Haz-Mat cars in a train
  - (4) The gage on excepted track must not be more than 4'10-1/4".
- (f) A track owner must advise FRA Regional Office at least 10 days prior to removal of a track from excepted status.

# Carrier Track Inspections

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- | Class        | Type  | Frequency    |
|--------------|---|--------------|
| Ex., 1, 2, 3 | Main, Siding  | Weekly       |
|              | >10 Million gross tons                              | Twice weekly |
| Ex., 1, 2, 3 | Yards   | Monthly      |
| 4, 5         |   | Twice weekly |
| 4, 5         | Rail internal detection-every 40mgt.                |              |
| 3            | Rail internal detection-every 30 mgt or once a year |              |

# Bridges, Tunnels







# West Valley Shipment

